

Blyudov D.A., Trotsenko V.P., Valeeva E.V.

**DESIGNING A KEYLESS ENTRY SYSTEM
FOR THE EDUCATIONAL BUILDING OF STI AT THE
NATIONAL RESEARCH NUCLEAR UNIVERSITY (NRNU) MEPhI**

*Seversk Technological Institute of NRNU MEPhI,
65, Kommunisticheskiy Prospekt, Seversk, Tomsk Region, 636036
e-mail: bvp8ee6k@gmail.com*

The modern world is a dynamic and rapidly evolving environment where progress never stands still. Digital technologies currently play a pivotal role in the daily lives of individuals. The integration of the physical and digital worlds into a unified interconnected ecosystem enhances the security and control of buildings and facilities, which is one of the most critical tasks of our time.

The implementation of a keyless access control system in an educational building will address a number of important tasks. Primarily, it will increase security protocols to research laboratories through the use of RFID cards, biometric authentication, and mobile authentication. The design of the system's central server will enable access to educational premises, creating a comfortable and innovative environment. The application of such technology will modernize access to offices as well as streamline the workflow of faculty and institutional personnel.

Unlike many existing analogues, this development incorporates fire sensors, an information system utilizing sound, and light effects. The implementation of this technology enables rapid evacuation without requiring RFID cards, biometric verification, or mobile authentication, thereby significantly reducing egress time for personnel and students during emergencies. Additionally, it ensures uninterrupted entry for emergency responders even in the event of server connectivity loss.

References

1. Makarenko A. I. Development of microcontroller software for a keyless access system / A. I. Makarenko. – Gomel, 2024. – 120 p.
2. Krivobokov D. E. Razrabotka sistemy besklyuchevogo dostupa [Development of a keyless access system] / D. E. Krivobokov, A. K. Loginov. – Sovremennye cifrovye tekhnologii [Modern digital technologies]. – 2022. – Pp. 206-209. (in Russian).